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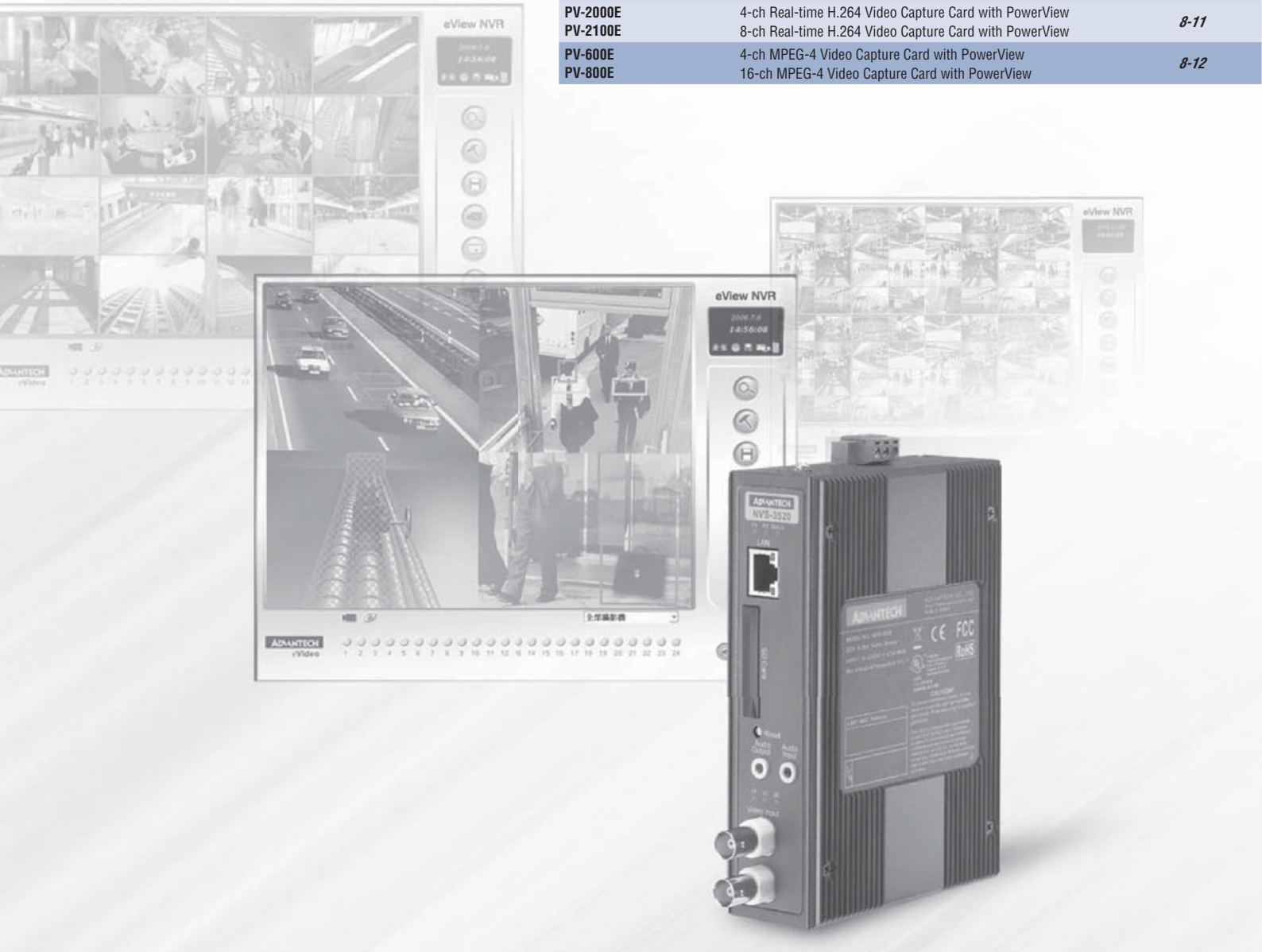
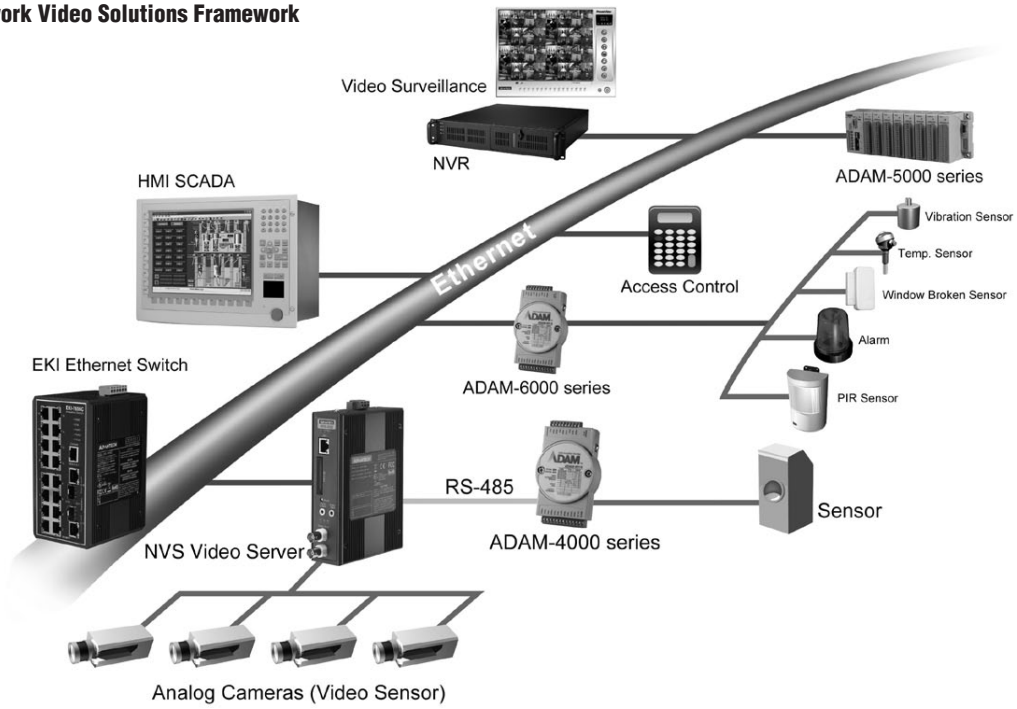


Industrial Video Surveillance Solutions Introduction

Industrial Network Video Solutions Framework



Market and Technology Trends

Much like the consumer market, video surveillance technology has progressed from analog to digital (DVR) devices, and now includes internet streaming video technology (IP-based video surveillance). In fact, traditional video currently has a slow growth rate, and conversely, IP-based video surveillance is booming. An IMS study reported that the demand for reliable video surveillance is increasing at a CAGR of 38% and will achieve a market value of USD $4 billion by 2011.

Contributing to this explosive growth are new video compression technologies, specifically MPEG4 and H.264. This provides high-quality images with low levels of video streaming data, which makes it easy to transfer via PC across the internet. Users can enjoy good quality video content in anywhere via internet, PMD (Portable Mobile Device) and 3G cell phones. In this new era of streaming video content, Advantech has created an all new video surveillance environment for automation applications. We call this our “information enabled" Video Surveillance System which is designed to manage video surveillance within automation applications. By providing PC-based products and solutions to serve the automation market, Advantech is leading the way with cutting-edge technology and value-added solutions.

Customer Value Proposition: Relevant Onscreen Information & Intelligent Video Systems

Advantech provides advanced intelligent video functions and innovative technology that allows field data to be easily displayed onscreen. Users can interact with real-time events and simultaneously look up field data on-screen to help them better manage the safety and security of their systems. For industrial security applications, live monitoring is not enough for vertical market needs. Restricted areas need to be monitored with intelligent video functions for more efficient management. In addition, there is more and more major equipment in factories that need to be measured not only by running status and controlling data, but also by live video monitoring to help operators and service engineers easily maintain and diagnose equipment, operating data, and status, such as in boiler, furnace, compressor, and gas piping applications.

Advantech offers complete industrial video surveillance solutions for vertical market applications, such as government infrastructure & utilities, transportation, factory facility and environment markets.

IP-based Video Surveillance

IP-based video surveillance technology is a new trend in the automation market, largely due to new video compression technology. As a leading provider of IP-based solutions, Advantech has provided Industrial Video Servers with MPEG4 and H.264 video compression technology and multi video streaming to meet market needs.

Information Enabled Video Surveillance Solutions

Receiving clear video images and information is key to fast response in the event of an emergency. IAG's video surveillance solutions provide advanced functionality to improve existing video surveillance, for example users can define information content, size, color, position, and action items on the video screen. The fonts and colors of data information can be customized to flash when an alarm occurs.

Intelligent Video: Video Content Analysis

Traditional video surveillance products provide only basic video monitoring functions. Advantech's video content analytics and intelligence functions enable efficient event detection, analysis and management processes, thus extending the intelligent video object functionality of IP-based video surveillance.

Technological advancements in IP and video compression, and increased awareness to the value of video surveillance have led to increase of intelligent video surveillance applications. Our Video surveillance solutions provide these intelligent video functions, such as virtual fence, unattended object, car/people counting and more.

Network-based Video Solutions for Industrial Automation

Seeing is believing, according to the old saying. That explains some of the advantages video surveillance has to offer for industrial automation. With cameras and the right technology, operators and engineers can survey a scene in a remote or dangerous area with ease. Also, they can be in many places at once, seeing with their own eyes what is happening without risking their safety. The challenge, however, is how to see intelligently. Staring at a screen is not the answer, since in such a setting it's all too easy to lose focus and miss an important event. Fortunately, advances in digital video compression and other technologies have made the job easier. They provide a way to combine what the camera sees with other data, presenting information in real time so that a more intelligent decision can be made. They also allow tracking video to be synchronized with alarm logs and stored for later analysis.

Benefits for video surveillance in industrial automation:

- Increases safety
- Improves productivity
- Cuts response time
- Enables more intelligent decisions
- Enhances record keeping

Industrial Video Servers

IP video servers are designed for delivering digital video streams in network environments. Normally the input side is the analog video data from CCTV cameras, and the output is the video stream with IP protocols. There are 3 major units in the video server for handling the video data: TV decoder, video compression engine and network processor. The TV decoder transfers the analog video data from CCTV camera to digital video data, and the digital video data will be compressed by the video compression engine (the major compression technologies now are MJPEG, MPEG4 and H.264). The compressed video data will finally be transferred to IP video stream through the network processor.

IP video servers play a significant role for network video applications, especially for video surveillance systems upgrading from DVR to IP-based. With cutting-edge technologies, Advantech provides series of industrial-grade IP video servers to fulfill the needs in industrial automation fields. The Advantech IP video servers provide real-time video performance with multiple streaming. Integrated with RS-485 serial ports, digital I/O, 2-way audio and local storage (like SD cards), Advantech IP video servers support many additional functions for enhancing the security and safety.

Information On-Screen

The RS-485 port of the IP video server is used for the PTZ (Pan/Tilt/Zoom) control of CCTV cameras. Connecting with ADAM-4000 series, Advantech IP video servers utilize RS-485 ports for collecting I/O information (like temperature, pressure) and post this information on the video frame through OSD functionality. This information-enabled video showing the status of the monitored object not only improves safety and productivity, but also reduces the response time and probability of accidents.

Integration with HMI/SCADA

Integrating video surveillance with HMI/SCADA systems is now a trend of automation applications. Advantech IP video servers support many SCADA systems making it easy for system integrators to build network video systems with both video surveillance and SCADA. Aside from enhanced security, safety and productivity, this integration also reduces construction costs.

e-View NVR Software

Designed for network video monitoring and recording, the e-View NVR software is bundled with Advantech IP video servers for free. This smart NVR software supports up to 16 channels of live views and recording with D1 (720 x 480) resolution at 30/25 frames per second, and this high performance can be achieved just with only an entry-level PC. The versatile screen modes and manual recording/playback settings are also available to meet a variety of video surveillance system needs.

Software Development Kit (SDK)

Customized system development is always required by the system integrators in automation applications. In order to meet the particular requirement for different vertical markets, Advantech provides a flexible SDK with the IP video servers. With this SDK, experienced system integrators can develop unique applications for IP video servers, or embed video streams in specified applications.

Target Applications

- Factory Automation
- Transportation
- Environment Automation
- Building Automation

NVS-3520

2-ch DIN-rail H.264 IP Video Server

Features

- 2-ch DIN-rail video server
- H.264 / MPEG4 / MJPEG dual streaming
- Up to D1@30fps for each channel
- 2-way audio function
- RS-485 for PTZ control and DI/O for proactive alarms and control
- Supports SD/SDHC cards up to 32GB for local backup
- Supports PoE (Power over Ethernet)
- Supports Information On-Screen
- Bundled with eView NVR video surveillance software and SDK

Introduction

NVS-3520 is an industrial-grade, 2-ch DIN-rail video server with H.264 / MPEG4 / MJPEG compression technology. NVS-3520 supports up to D1 resolutions and real-time frame rates (30fps@NTSC / 25fps@PAL) for live viewing and recording. The serial ports of RS-485 and digital I/O provide the functions of Camera PTZ (Pan/Tilt/Zoom) control and proactive alarm function. To enhance the security level, NVS-3520 supports SD/SDHC Card up to 32GB as a local backup storage. NVS-3520 also supports PoE (Power over Ethernet) functionality and can be used with PoE Ethernet switches. Information On-Screen provides the ability to show I/O data on the video frame. This allows users to view real-time status of the monitored object. With Advantech's eView NVR network video surveillance software and software development kit (SDK), NVS-3520 is an ideal solution for industrial customers to upgrade the CCTV cameras to IP-based video surveillance systems.

Specifications

Video

- **Resolution** QCIF/CIF/VGA/D1
- **Compression** H.264/MPEG4/MJPEG (dual streaming for any 2)
- **Frame Rate** up to 30fps @NTSC / 25fps @PAL (adjustable)
- **Bit Rate Control** Supports Constant bit rate (CBR) & Variable bit rate (VBR)
- **Other** Dynamic information on screen
  Date / Time / Title print

Audio

- **Sampling Rates** 8 KHz, line-in, mono
- **Compression** G.711 a-law / PCM
- **Audio-out** Line-out

Network

- **Interface** Ethernet wired, 10/100M Base-TX
- **Protocols** TCP/IP, UDP, HTTP, DHCP, DNS, DDNS, RTP/RTSP, SMTP, FTP

Connectors and Peripherals

- **Video-in** BNC, male / 1.0Vp-p, 75 ohms
- **Network** RJ-45 wired, 10/100M Base-TX
  IEEE 802.3af PoE Standard
- **Power plug** 12~24 V_{DC}/2pin, 5.08 Terminal Block
- **Audio-in/out** Phone jack connector, Female
- **Serial port** 2x RS-485 (1 for PTZ control; 1 for device control)
- **DI/O** DI x 4
  Logic 0: +-0 ~ 3 V_{DC}
  Logic 1: +-10 ~ 30 V_{DC}
  Type: Sink, Source (Wet contact)
  DO x 2, 24 V_{DC} 1 A
  Type: Relay, Form C

Software (eSearch and eView NVR in PC)

- **IP Discovery** Auto-scan installed IP devices from LAN
  Video/Audio format setting
  Auto-save the setting of each channel
- **Screen Mode** 1/4/6/7/8/9/10/13/16 split modes
  Channels grouping
  Screen modes switching by schedule
  Live Audio / Video delay time < 0.3sec
- **Recording** H.264 / MPEG-4 file format
  Manual over-write setting when the storage is full
  Supports Schedule / Manual recording
- **Playback** Playback by time bar, calendar
  Supports multiple channels playback simultaneously

Software Development Kit (SDK)

- **Video Server** HTTP CGI command sets
  RTSP stream command sets
  HTTP stream command sets
- **eView NVR** Library SDK
  ActiveX SDK
  Sample code

Physical Characteristics

- **Power Consumption** DC 24V / 375mA / 9Watt
- **Operating Temperature** -10~ 60° C (14 ~ 140° F)
- **Dimensions (W x D x H)** 106 x 43 x 152 mm
- **Safety** CE / FCC / RoHS

Ordering Information

- **NVS-3520** 2-ch DIN-rail H.264 IP Video Server

NVS-3510

1-ch DIN-rail H.264 IP Video Server

NEW

Features

- 1-ch DIN-rail video server
- H.264 / MPEG4 / MJPEG dual streaming
- Up to D1@30fps
- 2-way audio function
- RS-485 for PTZ control and DI/O for proactive alarms and control
- Supports SD/SDHC cards up to 32GB for local backup
- Supports PoE (Power over Ethernet)
- Supports Information On-Screen
- Bundled with eView NVR video surveillance software and SDK

Introduction

NVS-3510 is an industrial-grade, 1-ch DIN-rail video server with H.264 / MPEG4 / MJPEG compression technology. NVS-3510 supports up to D1 resolutions and real-time frame rates (30fps@NTSC / 25fps@PAL) for live viewing and recording. The serial ports of RS-485 and digital I/O provide the functions of Camera PTZ (Pan/Tilt/Zoom) control and proactive alarm function. To enhance the security level, NVS-3510 supports SD/SDHC cards up to 32GB as a local backup storage. NVS-3510 also supports PoE (Power over Ethernet) functionality and can be used with PoE Ethernet switches. Information On-Screen provides the ability to show I/O data on the video frame. This allows users to view real-time status of the monitored object. With Advantech's eView NVR network video surveillance software and software development kit (SDK), NVS-3510 is an ideal solution for industrial customers to upgrade the CCTV cameras to IP-based video surveillance systems.

Specifications

Video

- **Resolution** QCIF/CIF/VGA/D1
- **Compression** H.264/MPEG4/MJPEG (dual streaming for any 2)
- **Frame Rate** up to 30fps @NTSC / 25fps @PAL (adjustable)
- **Bit Rate Control** Supports Constant bit rate (CBR) & Variable bit rate (VBR)
- **Other** Dynamic information on screen
  Date / Time / Title print

Audio

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Network

- **Interface** Ethernet wired, 10/100M Base-TX
- **Protocols** TCP/IP, UDP, HTTP, DHCP, DNS, DDNS, RTP/RTSP, SMTP, FTP

Connectors and Peripherals

- **Video-in** BNC, male / 1.0Vp-p, 75 ohms
- **Network** RJ-45 wired, 10/100M Base-TX
  IEEE 802.3af PoE Standard
- **Power plug** 12~24VDC/3pin, 5.08 Terminal Block
- **Audio-in/out** Phone jack connector, Female
- **Serial port** 2x RS-485 (1 for PTZ control; 1 for device control)
- **DI/O** DI x 4
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  Type: Relay, Form C

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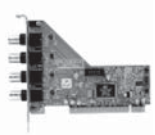
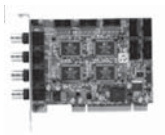
Ordering Information

- **NVS-3510** 1-ch DIN-rail H.264 IP Video Server

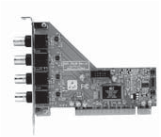
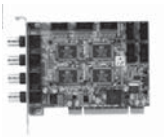
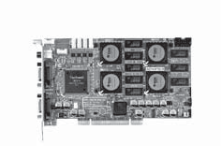
Industrial Video Capture Card Selection Guide

PV Series

	PV-600E	PV-800E	PV-2000E	PV-2100E
Video Standard	Composite for NTSC/PAL			
Format	MPEG-4		H.264	
Compression	Software Compression		Hardware Compression	
Video Input	4	16	4	8
Audio Input	1 (via motherboard)	1 (via motherboard)	4	8
Resolutions	QCIF / CIF / D1			
Recording Rate (NTSC/PAL)	30/25 fps (CIF)	120/100 fps (CIF)	120/100 fps (CIF)	240/200 fps (CIF)
Display Rate (NTSC/PAL)	30/25 fps (CIF)	120/100 fps (CIF)	120/100 fps (CIF)	240/200 fps (CIF)
Interface	PCI v2.2			
Operating Temp.	-10 ~ 60° C (14 ~ 140° F)			
Storing Temp.	-20 ~ 70° C (-4 ~ 158° F)			
System	Windows 2000 / Windows XP / Windows XP Embedded			
Platform Req.	CPU: Intel Pentium 4 2.0GHz above (reference for DVP-7010E/7020E)			
Software	Bundle with Power View 6000 Video Surveillance Software			
Direct X	Version 9 or above			
Dimension	125.38 x 97.25 mm	125.38 x 97.25 mm	154 x 94 mm	200 x 108 mm
Page	8-12	8-12	8-11	8-11

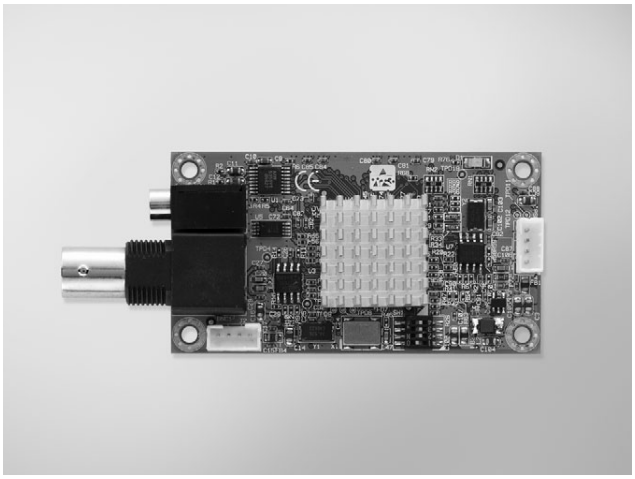
DVP Series

	DVP-7010BE	DVP-7020BE	DVP-7421BE	DVP-2420E	DVP-1412E
Video Standard	Composite for NTSC/PAL				
Format	MPEG-4				
Compression	Software Compression		Hardware Compression		
Video Input	4	16	4	2	1
Audio Input	-	-	4	2	1
Audio Output	-	-	-	2	-
Resolutions	QCIF / CIF / D1				
Recording Rate (NTSC/PAL)	30/25 fps (CIF)	120/100 fps (CIF)	120/100 fps (D1)	60/50 fps (D1)	30/25 fps (D1)
Display Rate (NTSC/PAL)	30/25 fps (CIF)	120/100 fps (CIF)	120/100 fps (D1)	60/50 fps (D1)	30/25 fps (D1)
Interface	PCI v2.2	PCI v2.2	PCI v2.2	PCI-104	USB 2.0 High Speed
Operating Temp.	-10 ~ 60° C (14 ~ 140° F)				
Storing Temp.	-20 ~ 70° C (-4 ~ 158° F)				
System	Windows 2000 / Windows XP / Windows XP Embedded				
Platform Req.	CPU: Intel Pentium 4 2.0GHz above (reference for DVP-7010E/7020E)				
Demo Program	Complete demo program with VC++ sample code for reference				
Direct X	Version 9 or above				
Dimension	125.38 x 97.25 mm	125.38 x 97.25 mm	182 x 106 mm	96 x 90 mm	70 x 38 mm
Page	8-8	8-8	8-9	8-10	8-7

DVP-1412E

1-ch USB MPEG-4 Video Capture Module with SDK



Features

- 1 channel composite inputs with MPEG-4 hardware compression
- Supports ADPCM hardware audio compression
- Able to install 8 DVP-1412E for up to 8 channels per PC
- 30/25 fps (NTSC/PAL) at D1 resolution for recording and display
- 16 x 16 OSD text of up to 96 characters
- High speed USB 2.0 interface
- SDK supports Windows XP/XPe/Windows 2000 with VC++ sample codes

Introduction

The DVP-1412E is compact-sized, hardware MPEG-4 video encoder module that are designed for embedded video/audio applications and simple digital video upgrade solutions. It can be easily integrated into many different types of hardware, like Panel PCs, ATMs, and embedded PCs. The DVP-1412E are capable of delivering streaming video up to full D1 resolution at full-motion frame rates. By using a standard high-speed USB 2.0 interface, the DVP-1412E can easily integrates with most Single Board Computers or PC-based systems. Using 128-byte EEPROM, programmers can write protection codes or set system parameters via the SDK. DVP-1412E delivers standard composite video and audio input through BNC connectors and comes complete with SDK and driver for MS Windows 2000 or XP. All these great features make the DVP-1412E very easy for system integrators to develop applications. DVP-1412E are the ideal compact embedded digital video and audio solution for multiple applications.

Specifications

Video

- **Video Standard** Composite for NTSC/PAL
- **Video Input** 1 x BNC connector
- **Resolution** Up to D1 (NTSC: 720 x 480; PAL: 720 x 576)
- **Max Recording Rate** 30/25 fps (NTSC/PAL)
- **Display Rate** 30/25 fps (NTSC/PAL)
- **Video Compression** MPEG-4

Audio

- **Audio Input** 1 x stereo input (Phone Jack)
- **Audio Encoding** ADPCM H/W encoding

Software Development Kit

- **Operating System** Supports Windows XP/XPe and Windows 2000
- **DirectX Required** Version 9 or above
- **Demo Program** Complete demo program with VC++ sample code for reference

Physical Characteristics

- **Host Interface** USB 2.0 High Speed
- **Operating Temperature** -10 ~ 60° C (14 ~ 140° F)
- **Storing Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Dimensions** 70 x 38 mm (2.75" x 1.49")

Versatile SDK Support

Advantech provides software development kit (SDK), a set of development tools that allows a software engineer to integrate our capture card into many different types of system. Functions include video recording, playback, and instant preview.

The SDK package would include:

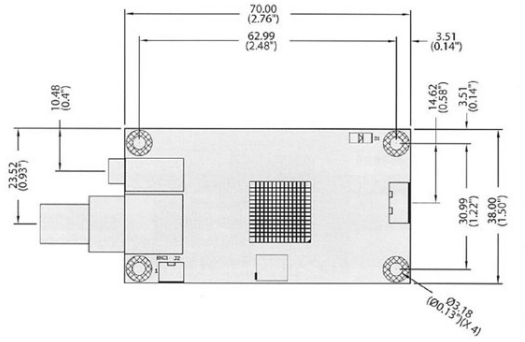
- Software Library
- SDK Manual
- Sample Program

Ordering Information

- **DVP-1412E** 1-ch USB MPEG-4 Video Capture Module w/ SDK

Dimensions

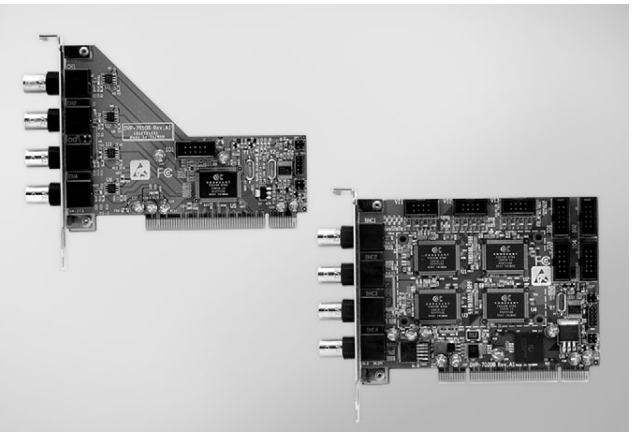
Unit: mm (inch)



DVP-7010BE
DVP-7020BE

4-ch MPEG-4 Video Capture Card with SDK

16-ch MPEG-4 Video Capture Card with SDK



RoHS COMPLIANT 2002/95/EC CE FCC

Features

- 4 or 16 channel composite inputs with MPEG-4 compression
- Able to mix DVP-7010BE with DVP-7020BE card stacks for up to 24 channels per PC
- 30/25 fps (NTSC/PAL) or 120/100 fps (NTSC/PAL) at D1 resolution for recording and display
- Conexant fusion 878A video capture chips on board
- SDK supports Windows XP/XPe/Windows 2000 with VC++ sample codes
- Supports Watchdog funtion

Introduction

The DVP-7010BE and DVP-7020BE are MPEG-4 compression, PCI-bus video capture cards. They support up to 4 or 16 channel inputs by share-frame technology and capture up to D1 resolution. DVP-7010BE and DVP-7020BE support NTSC/PAL composite video input through BNC connectors and digitizes the data to PC through PCI bus. The DVP-7010BE and DVP-7020BE can be used for video capture application or video surveillance with SDK support for software encoding and capture functions.

Specifications

Video

- **Video Standard** Composite for NTSC/PAL
- **Video Input** 4 or 16 BNC connectors
- **Resolution** Up to D1 (NTSC: 720 x 480; PAL: 720 x 576)
- **Max Recording Rate** DVP-7010BE: 30/25 fps for all channels
DVP-7020BE: 120/100 fps for all channels
- **Display Rate** DVP-7010BE: 30/25 fps for all channels
DVP-7020BE: 120/100 fps for all channels
- **Video Compression** MPEG-4 Software Compression
- **Video Output** Multiple YCrCb, RGB, and YUV planar formats supported

Software Development Kit

- **Operating System** Supports Windows XP/XPe and Windows 2000
- **DirectX Required** Version 9 or above
- **Demo Program** Complete demo program with VC++ sample code for reference

Physical Characteristics

- **Host Interface** PCI V2.2
- **DI/O** Support ADAM-4055 8DI/8DO Module
- **Operating Temperature** -10 ~ 60° C (14 ~ 140° F)
- **Storing Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Dimensions** 125.38 x 97.25 mm (4.87" x 3.82")

Versatile SDK Support

Advantech provides software development kit (SDK), a set of development tools that allows a software engineer to integrate our capture card into many different types of system. Functions include video recording, playback, and instant preview.

The SDK package would include:

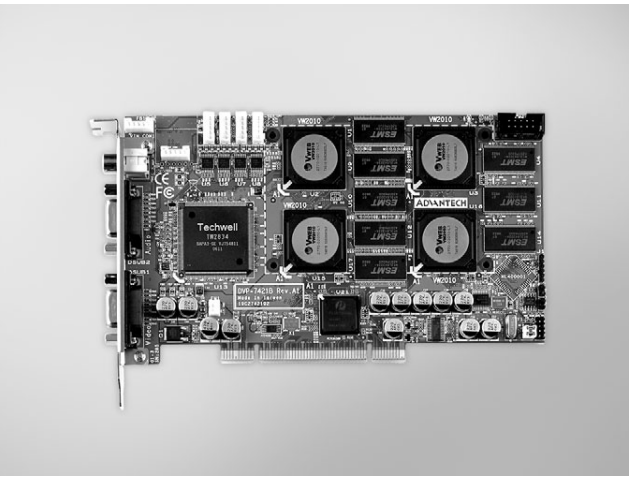
- Software Library
- SDK Manual
- Sample Program

Ordering Information

- **DVP-7010BE** 4-ch MPEG-4 Video Capture Card w/ SDK
- **DVP-7020BE** 16-ch MPEG-4 Video Capture Card w/ SDK

DVP-7421BE

4-ch Real-time MPEG-1/2/4 Video Capture Card with SDK



Features

- 4 channel composite inputs with MPEG-1/2/4 hardware compression
- Supports MPEG1 Layer II audio compression
- Able to interconnect 4 DVP-7421BE for up to 16 channels per PC
- 120/100 fps (NTSC/PAL) at D1 resolution for recording and display
- Excellent DVD level Audio/Video quality using VW2010 codec engine
- SDK supports Windows XP/XPe/Windows 2000 with VC++ sample codes

Introduction

The DVP-7421BE is a high-end video capture board with a hardware codec engine. It supports 4-channel live preview, video/audio compression and playback at D1 resolution and 120/100 fps. Up to four DVP-7421BE boards can be installed in one PC for concurrent live viewing, compression and playback of up to 16 channels at D1 resolution and 480 fps. The programmer can use the comprehensive SDK to load protection code or system parameters into the on-board 128 byte EEPROM. The SDK comes with sample code for reference. The hardware codec engine makes the DVP-7421BE the ideal platform for applications like network video servers, video conferencing, video training systems, and high-end digital video surveillance.

Specifications

Video

- **Video Standard** Composite for NTSC/PAL
- **Video Input** 4 channels
- **Resolution** Up to D1 (NTSC: 720 x 480; PAL: 720 x 576)
- **Max Recording Rate** 30/25 fps (NTSC/PAL) for each channel
- **Display Rate** 30/25 fps (NTSC/PAL) for each channel
- **Video Compression** MPEG-1/2/4
- **Video Output** PCI preview/playback stream
  Analog video out from Smart Quad with composite connector
- **Video Loopout** 4 x BNC Connectors or 5-pin internal connector

Audio

- **Audio Input** 4 x stereo inputs (4 mono x BNC connectors or 2 x 5-pin internal connectors)
- **Audio Encoding** Supports MPEG1-Layer II

Software Development Kit

- **Operating System** Supports Microsoft Windows XP/XPe and Windows 2000
- **DirectX Required** Version 9 or above
- **Demo Program** Complete demo program with VC++ sample code for reference

Physical Characteristics

- **Host Interface** PCI V2.2
- **DI/O** Support ADAM-4055 8DI/8DO Module
- **Operating Temperature** -10 ~ 60° C (14 ~ 140° F)
- **Storing Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Dimensions** 182.6 x 106.9 mm (7.2" x 4.2")

CPU Efficiency

With the MPEG4 hardware codec engine, the DVP-7421BE supports triple functions-for video encoding, decoding, and live preview. This frees up CPU computing power for other integrated functions. For an existing system, the DVP-7421BE is an ideal way to expand the video functions without a major hardware upgrade.

- Performance Test on Pentium IV 2.4 GHz
- Encoding/Decoding Setting per channel: D1(720x480), 30 FPS, MPEG4

1 x DVP-7421BE Card for 120 FPS D1

- **4 CH Encode Only** 0 ~ 5 %
- **4 CH Encode + Preview** 15 %
- **4 CH Encode + Preview + Decode** 15 ~ 20 %

4 x DVP-7421BE Card for 480 FPS D1

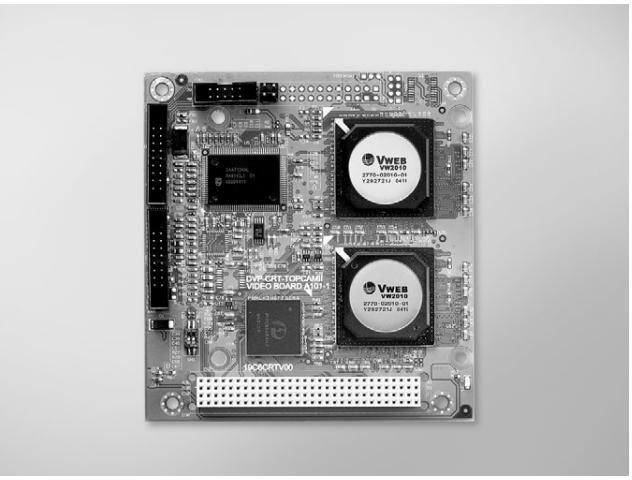
- **16 CH Encode Only** 10 %
- **16 CH Encode + Preview** 40 %
- **16 CH Encode + Preview + Decode** 40 ~ 50%

Ordering Information

- **DVP-7421BE** 4-ch MPEG-1/2/4 Video Capture Card w/ SDK

DVP-2420E

2-ch PCI-104 MPEG-1/2/4 Video Capture Module with SDK



Features

- 2 channel composite inputs with MPEG-1/2/4 hardware compression
- Supports MPEG1 Layer II audio compression
- 60/50 fps (NTSC/PAL) at D1 resolution for recording and display
- Excellent DVD level Audio/Video quality using VW2010 codec engine
- SDK supports Windows XP/XPe/Windows 2000 with VC++ sample codes

Introduction

The DVP-2420E is a PCI-104 module that supports two channel full-motion simultaneous video/audio capture and compression/decompression. It adopts a high performance MPEG-1/2/4 hardware codec to provide video with D1 resolution at 30/25 fps and MPEG-1 Layer II audio. Combined with an additional two channel full-motion preview and codec engine, the DVP-2420E is an ideal platform for high quality embedded video applications such as digital video surveillance, video conferencing, digital signage, set-top-box and IP video.

Specifications

Video

- **Video Standard** Composite for NTSC/PAL
- **Video Input** 2 channels
- **Resolution** Up to D1 (NTSC: 720 x 480; PAL: 720 x 576)
- **Max Recording Rate** 30/25 fps (NTSC/PAL) for each channel
- **Display Rate** 30/25 fps (NTSC/PAL) for each channel
- **Video Compression** MPEG-1/2/4
- **Video Output** 2 x BNC connectors for decoded playback

Audio

- **Audio Input** 2 x stereo inputs
- **Audio Output** 2 x stereo outputs
- **Audio Encoding** Supports MPEG1-Layer II

Software Development Kit

- **Operating System** Supports Windows XP/XPe and Windows 2000
- **DirectX Required** Version 9 or above
- **Demo Program** Complete demo program with VC++ sample code for reference

Physical Characteristics

- **Host Interface** PCI-104
- **DI/O** Support ADAM-4055 8DI/8DO Module
- **Operating Temperature** -10 ~ 60° C (14 ~ 140° F)
- **Storing Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Dimensions** 95.88 x 90.17 mm (3.77" x 3.55")

Versatile SDK Support

Advantech provides software development kit (SDK), a set of development tools that allows a software engineer to integrate our capture card into many different types of system. Functions include video recording, playback, and instant preview.

The SDK package would include:

- Software Library
- SDK Manual
- Sample Program

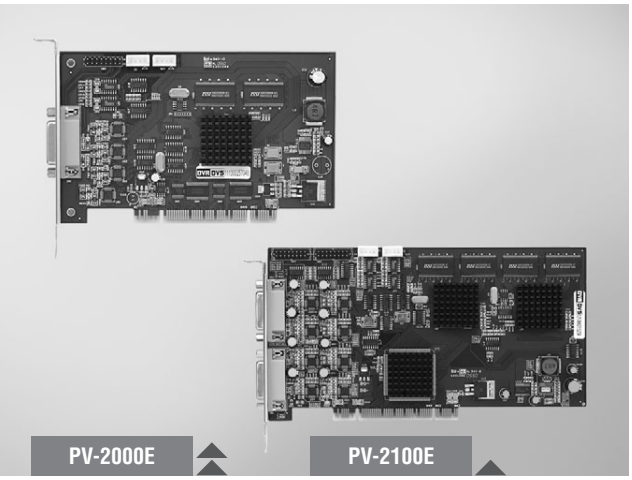
Ordering Information

- **DVP-2420E** 2-ch PCI-104 MPEG-1/2/4 Video Capture Module w/ SDK

PV-2000E
PV-2100E

4-ch Real-time H.264 Video Capture Card with PowerView

8-ch Real-time H.264 Video Capture Card with PowerView



Features

- 4 or 8 channel composite inputs with H.264 compression
- Able to mix PV-2000E with PV-2100E card stacks for up to 32-ch per PC
- 120/100 fps (NTSC/PAL) or 240/200 fps (NTSC/PAL) at D1 resolution for recording and display
- Bundled with PowerView 6000 advanced surveillance software

Introduction

The PV-2000E and PV-2100E are application-ready digital video surveillance cards with PowerView application software that deliver high expansion and integration capabilities with a user friendly interface. PV-2000E and PV-2100E use the most advanced digital video compression technologies and are the best choice for excellent image quality and full-motion video performance. PowerView 6000 software provides integrated digital recording, network monitoring, video backup, alarm notification and security control.

Specifications

Video

- **Video Standard** Composite for NTSC/PAL
- **Video Input** 4 CH (PV-2000E) or 8 CH (PV-2100E)
- **Resolution** 352 x 240, 704 x 240 and 704 x 480 (NTSC)
  352 x 288, 704 x 288 and 704 x 576 (PAL)
- **Max Recording Rate** 120/100 fps or 240/200 fps (NTSC/PAL) @ CIF for all channels*
- **Display Rate** 120/100 fps or 240/200 fps (NTSC/PAL) @ CIF for all channels*
- **Video Compression** H.264 Hardware Compression

Audio

- **Audio Input** 4 x Stereo inputs
- **Audio Output** 1 CH Output (audio via motherboard)

Physical Characteristics

- **Host Interface** PCI V2.2
- **DI/O** Support ADAM-4055 8DI/8DO Module
- **Operating Temperature** -10 ~ 60° C (14 ~ 140° F)
- **Storing Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Dimensions** 154 x 94 mm (6.0" x 3.7") (PV-2000E)
  200 x 108 mm (7.9" x 4.3") (PV-2100E)
- **Application software** PowerView 6000
- **Operaing System** Suppors Windows XP/XPe and Windows 2000

*Note: Performance test on Intel Core 2 Duo 6400 CPU and 1024 MB Memory

*Note: Only PV-2100E support 240/200 fps

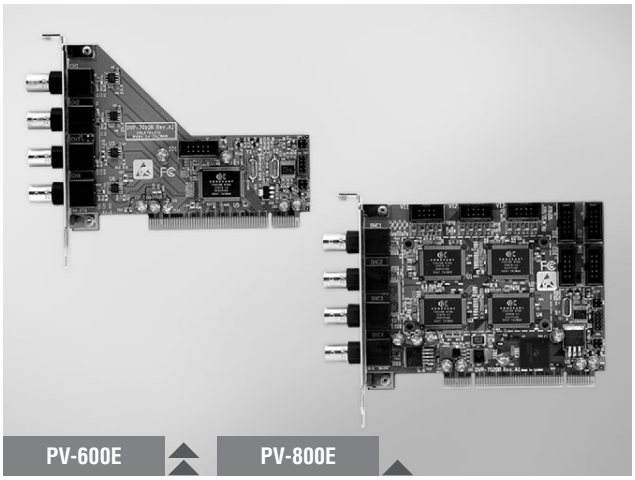
Ordering Information

- **PV-2000E** 4-ch Real-Time H.264 Video Capture Card w/ PowerView
- **PV-2100E** 8-ch Real-Time H.264 Video Capture Card w/ PowerView

PV-600E
PV-800E

4-ch MPEG-4 Video Capture Card with PowerView

16-ch MPEG-4 Video Capture Card with PowerView



Features

- 4 or 16 channel composite inputs with MPEG-4 compression
- Able to mix PV-600E with PV-800E card stacks for up to 24 channels per PC
- 30/25 fps (NTSC/PAL) or 120/100 fps (NTSC/PAL) at D1 resolution for recording and display
- Conexant fusion 878A video capture chips on board
- Supports ADAM-4055 8DI/8DO Module
- Bundled with PowerView 6000 advanced surveillance software
- Supports Watchdog function

Introduction

The PV-600E and PV-800E digital video surveillance kits are MPEG-4 compression, PCI-bus video capture cards. With the use of PowerView 6000 surveillance software, PV-600E and PV-800E can provide 4-channel and 16-channel video monitoring capability at D1 resolution for recording and display. For large-scale application, users can mix PV-600E with PV-800E card stacks for up to 24 channels per PC. PowerView 6000 software provides integrated digital recording, network monitoring, video backup, alarm notification and security control.

Specifications

Video

- **Video Standard** Composite for NTSC/PAL
- **Video Input** 4 or 16 BNC connectors
- **Resolution** 352 x 240, 704 x 240 and 704 x 480 (NTSC)
  352 x 288, 704 x 288 and 704 x 576 (PAL)
- **Max Recording Rate** PV-600E: 30/25 fps (CIF) for all channels*
  PV-800E: 120/100 fps (CIF) for all channels*
- **Display Rate** PV-600E: 30/25 fps (CIF) for all channels*
  PV-800E: 120/100 fps (CIF) for all channels*
- **Video Compression** MPEG-4 Software Compression
- **Video Output** Multiple YCrCb, RGB, and YUV planar formats supported
- **Audio Input** 1 (via Motherboard)
- **Audio Output** 1 (via Motherboard)

Physical Characteristics

- **Host Interface** PCI V2.2
- **DI/O** Support ADAM-4055 8DI/8DO Module
- **Operating Temperature** -10 ~ 60° C (14 ~ 140° F)
- **Storing Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Dimensions** 125.38 x 97.25 mm (4.87" x 3.82")
- **Application software** PowerView 6000
- **Operating System** Supports Windows XP/XPe and Windows 2000

*Note: Performance test on Intel Core 2 Duo 6400 CPU and 1024 MB Memory

Ordering Information

- **PV-600E** 4-ch MPEG-4 Video Capture Card w/ PowerView
- **PV-800E** 16-ch MPEG-4 Video Capture Card w/ PowerView